

## Case 3480

### *Mastodon waringi* Holland, 1920 (currently *Haplomastodon waringi*; Mammalia, Proboscidea): proposed conservation of usage by designation of a neotype

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**Abstract.** The purpose of this application, under Article 75.5 of the Code, is to conserve the usage of the name *Mastodon waringi* Holland, 1920, for a species of extinct South American proboscidean, by designating a neotype. Because *M. waringi* has had long and wide (though incorrect) usage as a species of *Haplomastodon*, and because the holotype of *M. waringi* is undiagnostic, the neotype designation is proposed to promote stability of nomenclature.

**Keywords.** Nomenclature; taxonomy; Mammalia; Proboscidea; Ecuador; Brazil; *Haplomastodon*; *Cuvieronius*; *Mastodon waringi*; gomphothere; South America.

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1. In a review of late Cenozoic South American gomphotheres, Hoffstetter (1950, p. 24) named *Haplomastodon* as a new subgenus of *Stegomastodon* Pohlig, 1912. He designated *Mastodon chimborazai* Proaño, 1922 from Ecuador as the type species of *Haplomastodon*. Hoffstetter (1950, p. 24) also noted that the holotype skull of *M. chimborazai* had been acquired by the Central University of Quito, where it had disappeared during the fire of December 1929.

2. Simpson & Paula Couto (1955, p. 11) regarded *Haplomastodon chimborazai* as a junior subjective synonym of *Mastodon waringi* Holland, 1920. Hoffstetter (1955, p. 485) objected to this, noting that *H. chimborazai* was ‘fondé sur un type excellent (crâne complet et divers éléments squelettiques d’un même individu)’, [based on an excellent type (a complete skull and various skeletal elements of a single individual)], whereas *M. waringi* was based on ‘un mauvais matériel fragmentaire’ [bad and fragmentary material].

3. Simpson & Paula Couto (1957, p. 172) also stated that *Mastodon waringi* was the type species of *Haplomastodon*. This is contrary to Article 68.2 of the present Code (Type species by original designation), because Hoffstetter (1950, p. 4) had explicitly designated *Mastodon chimborazai* as the type species of *Haplomastodon*.

4. Nevertheless, all subsequent workers on the taxonomy of South American fossil proboscideans have followed Simpson & Paula Couto (1957) and treated *Haplomastodon waringi* as the type species of *Haplomastodon* (e.g. Parodi Bustos, 1962; Tobien, 1973; Laurito, 1988; Ficarelli et al., 1993, 1995; Casamiquela et al., 1996; Shoshani & Tassy, 1996; Lucas et al., 1997; Alberdi et al., 2002, 2004; Prado et al., 2002, 2003, 2005; Ferretti, 2008; Lucas, 2008).

5. The type series of *Mastodon waringi* (Carnegie Museum of Natural History), CM 11033, was originally described by Holland (1920) as an incomplete lower jaw

and other fragments collected at Pedra Vermelha in Bahia, Brazil. Holland (1920, fig. 4) only illustrated a molar fragment of the type material (specimen CM 11033f), while Lucas (2008) described and illustrated the entire specimen, which, in 2007, only consisted of molar and tusk fragments. Indeed, Simpson & Paula Couto (1957, p. 172) stated that during the 1950s all that could be located of the holotype were three molar fragments, the tip of a tusk, a tusk dentine fragment and part of the distal end of a tibia.

6. Simpson and Paula Couto (1957, p. 172) considered that CM 11033 could be distinguished from the other genera of South American gomphotheres they recognised, *Notiomastodon*, *Cuvieronius* and *Stegomastodon*, based largely on its geographic origin in eastern Brazil, where the only gomphothere fossils found are *Haplomastodon*. However, recent workers (e.g. Ficarelli et al., 1995; Lucas, 2008) have concluded that the molar and tusk fragments that constitute CM 11033 are not sufficient to identify it as either *Haplomastodon* or *Cuvieronius*.

7. Despite longstanding and wide usage, *Mastodon waringi* is not the correct type species of *Haplomastodon*, and the holotype of *M. waringi* is not diagnostic of either *Haplomastodon* or *Cuvieronius*. Therefore, the species name *M. waringi* is a nomen dubium (Ficarelli et al., 1995; Lucas, 2008).

8. Although the holotype of *Mastodon chimborazai*, a skull, was destroyed in a fire in 1929, it was photographically illustrated and displays cranial features currently considered to be diagnostic of *Haplomastodon* (e.g. Hoffstetter, 1950; Ficarelli et al., 1995; Lucas, 2008). Ficarelli et al. (1995) proposed a neotype for *M. chimborazai*, MECN (Museo Ecuatoriano de Ciencias Naturales, Quito) 82, 83, 84, 133: a skull, lower jaw and partial postcranium of a single individual from Ecuador that they illustrated (Ficarelli et al., 1995, pl. 89, figs. 1–2; pl. 90, figs. 1, 3, 4). This is an appropriate neotype specimen because it preserves anatomical features of the skull, tusks, lower jaw, cheek teeth and cervical vertebrae currently deemed diagnostic of *Haplomastodon*.

9. In proposing a neotype for *Mastodon chimborazai*, Ficarelli et al. (1995) also proposed to invalidate *Mastodon waringi*, as a nomen dubium, and to use *Haplomastodon chimborazai* as a valid name for a species in the genus *Haplomastodon*. This runs contrary to more than 50 years of wide usage prior to Ficarelli et al. (1995), during which time *Haplomastodon waringi* had been recognised as the type and only valid species of *Haplomastodon* (see point 4 above).

10. Instead, in accordance with Article 75.5 of the Code, I propose a solution to possible identity problems associated with *Mastodon waringi* that promotes the stability of nomenclature, i.e. to designate the skull, lower jaw and partial postcranium of a single individual from Ecuador (MECN 82, 83, 84, 133 at the Museo Ecuatoriano de Ciencias Naturales, Quito) as the neotype of *M. waringi* – the same specimen that Ficarelli et al. (1995, pl. 89, figs. 1–2; pl. 90, figs. 1, 3, 4) designated as the neotype of *H. chimborazai*. *H. chimborazai* would retain its status as the type species of *Haplomastodon* (Article 67.1.2 – The name of a type species remains unchanged).

11. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for *Mastodon waringi* Holland, 1920 and to designate the skull, lower jaw and partial

postcranium of a single individual from Ecuador (MECN 82, 83, 84, 133 at the Museo Ecuatoriano de Ciencias Naturales, Quito) as neotype of *Mastodon waringi*;

- (2) to place on the Official List of Specific Names in Zoology the name *warengi*, as published in the binomen *Mastodon warengi* Holland, 1920 and as defined by the neotype designated in (1) above.

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